LLNL Status

May 1, 2002

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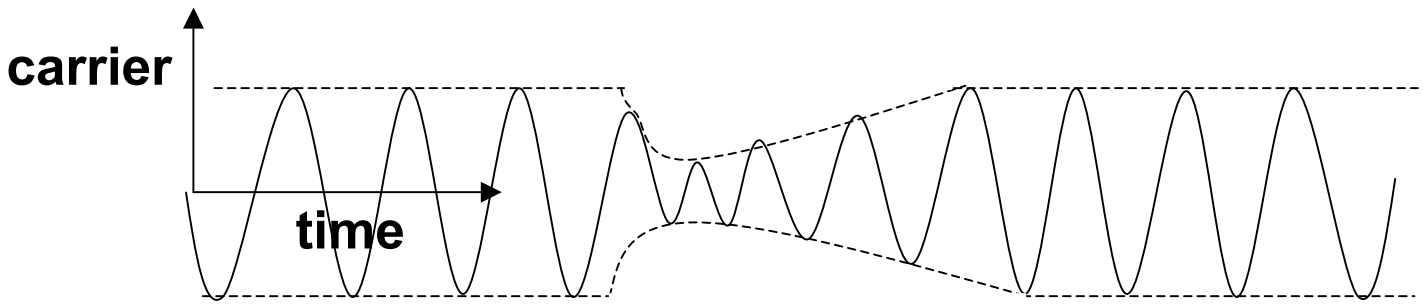
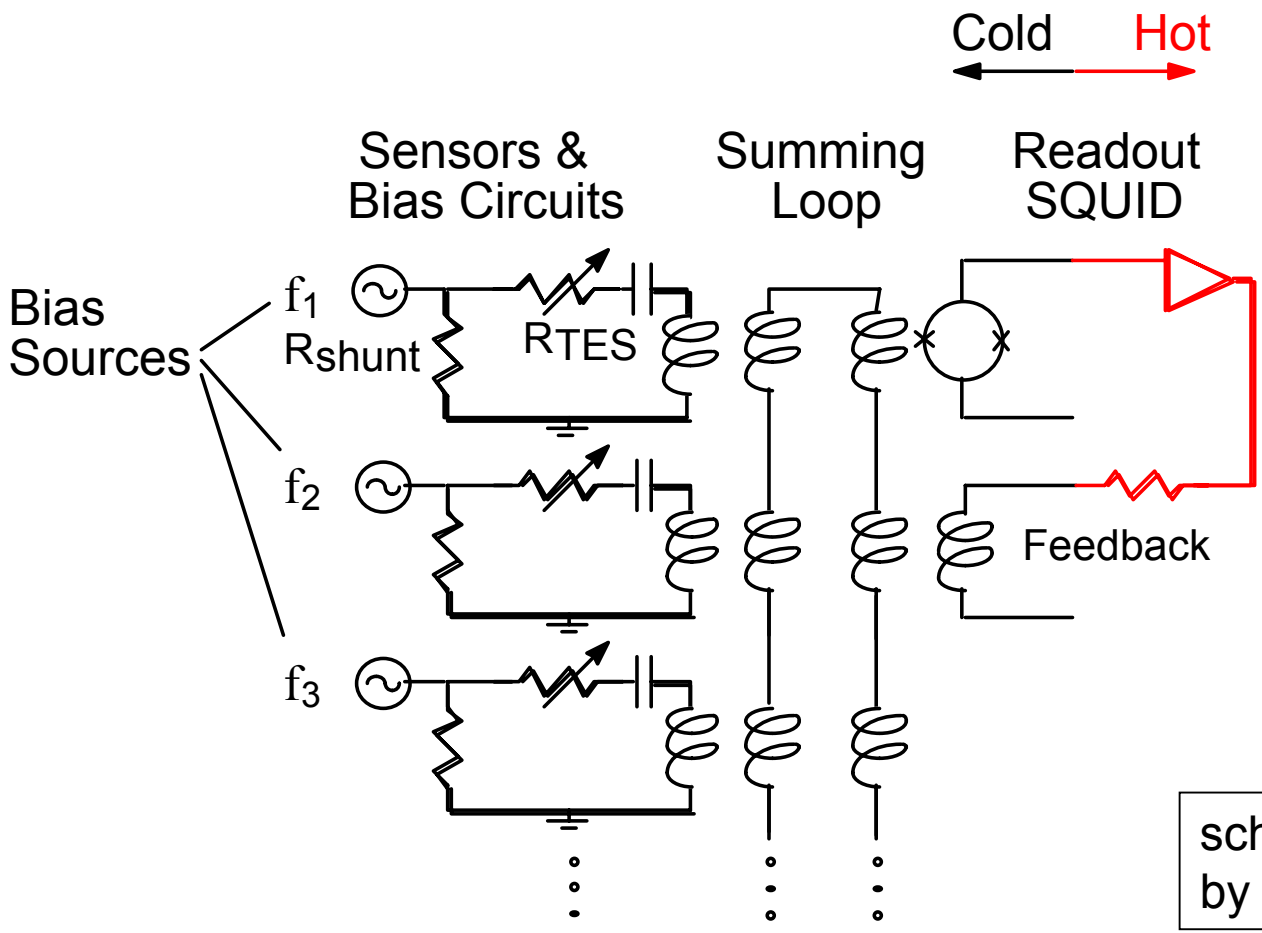
Frequency Domain Multiplexing

- Use AC sensor bias. Each pixel has identifying frequency
- Photons reduce bias envelope



- We are multiplexing calorimeters designed to measure gamma-rays
  - **- resolution ~ 60 eV at 60 keV**
  - **- fall time = 1 ms**
  - **- area = 1 mm^2**

Multiplexing Circuit

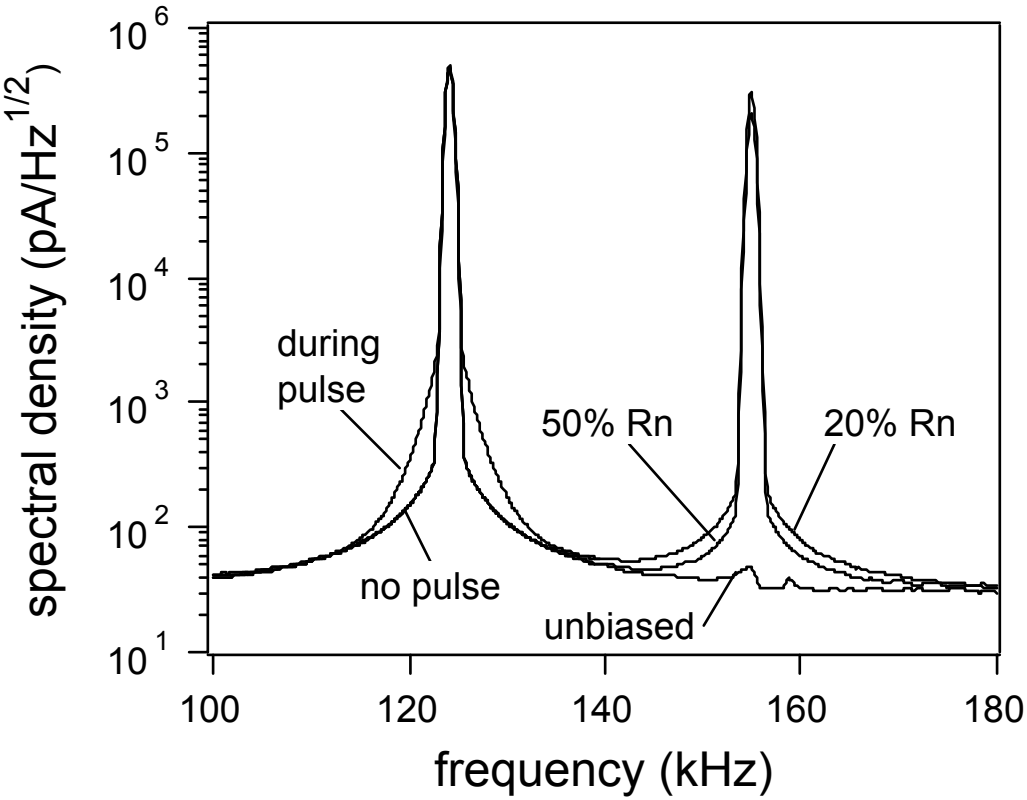


scheme proposed by Richards, Lee

In 2D array, bias by row, read by column

Two sensor multiplex

measured spectral density



resolution summary

$^2E_{FWHM}$	device #1	device #2
only recipient of bias	65 eV	62 eV
both sensors biased	63 eV	65 eV
both biased, coincident pulses	64 eV	63 eV

energy resolution unaffected by multiplexing